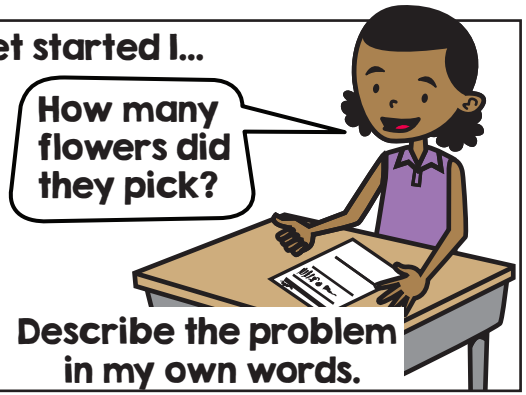
Make sense of problems and persevere in solving them. MP.1

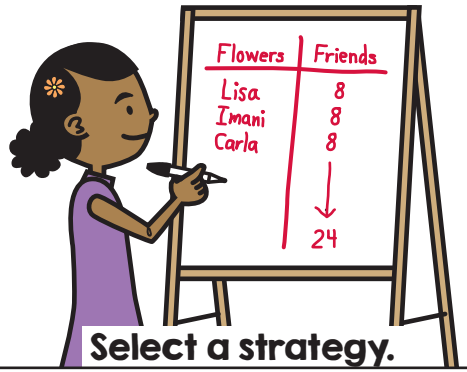
I can choose strategies for solving a problem and checking my answers.

To get started I...



Describe the problem in my own words.

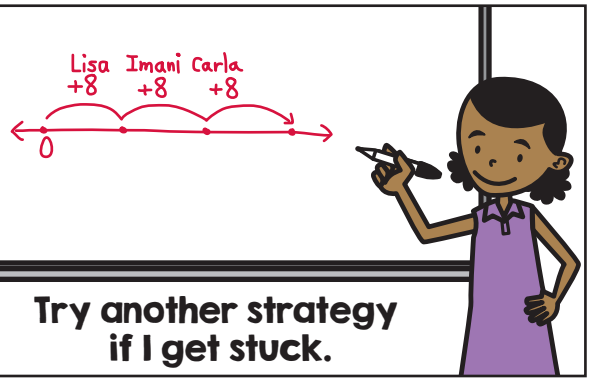
Decide what information I need.



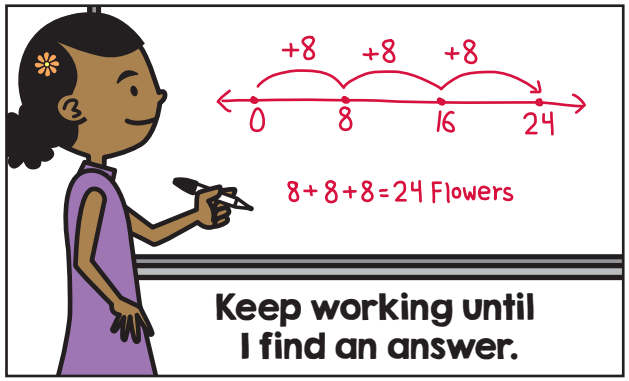
Select a strategy.

While I'm working I...

Follow my plan to solve the problem.

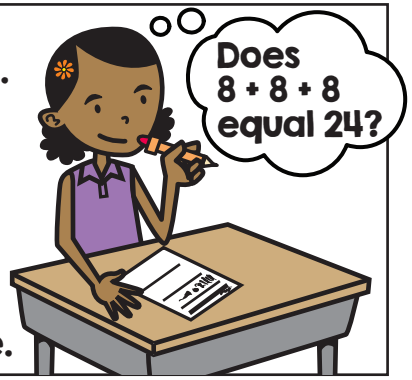


Try another strategy if I get stuck.

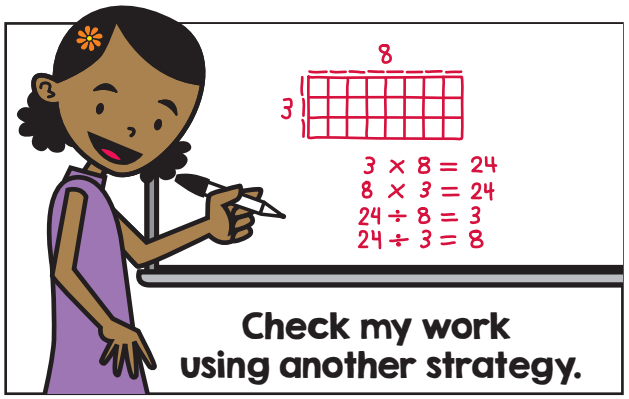


Keep working until I find an answer.

When I have an answer I...



Ask if it makes sense.



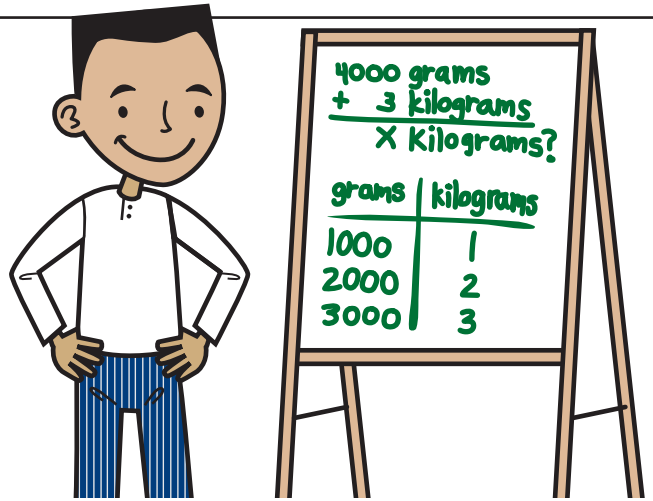
Check my work using another strategy.

Check with a partner. If our answers differ, I figure out why.

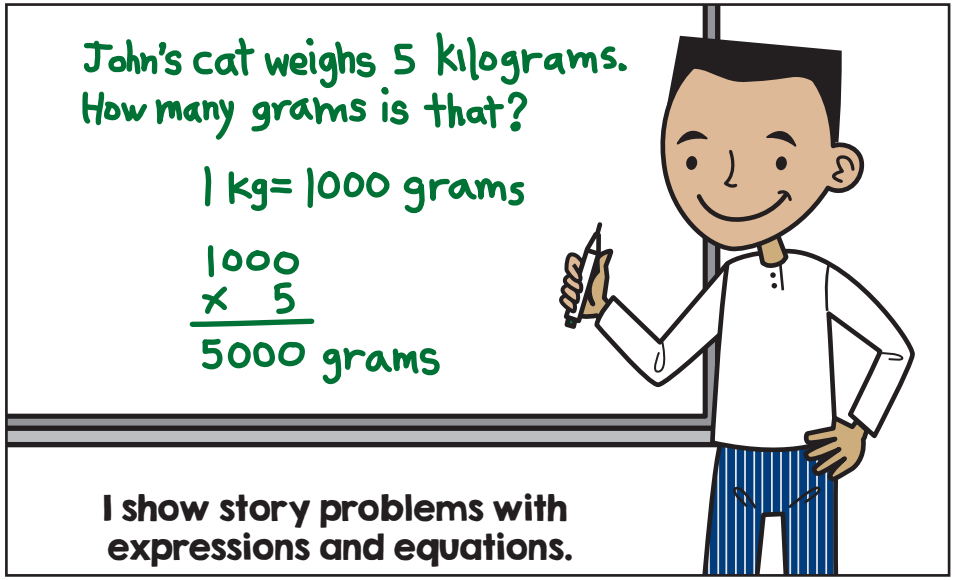
Reason abstractly and quantitatively.

MP. 2

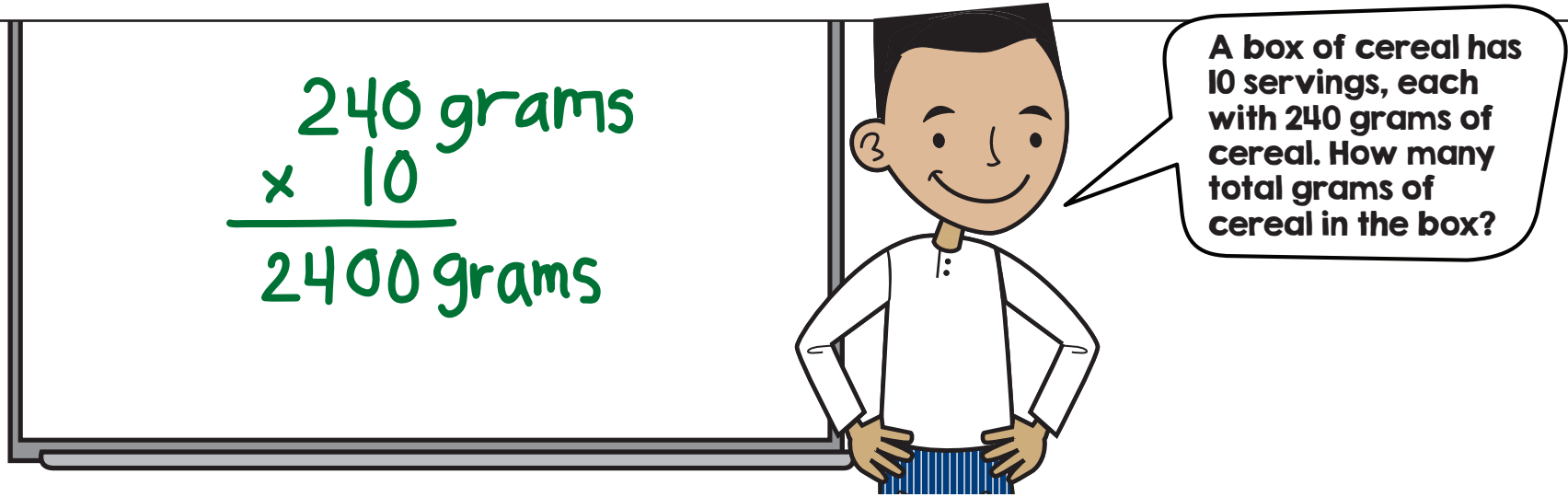
I can represent math problems in a variety of ways and think about what the problems mean.



I show my thinking with labeled sketches, charts, or diagrams.



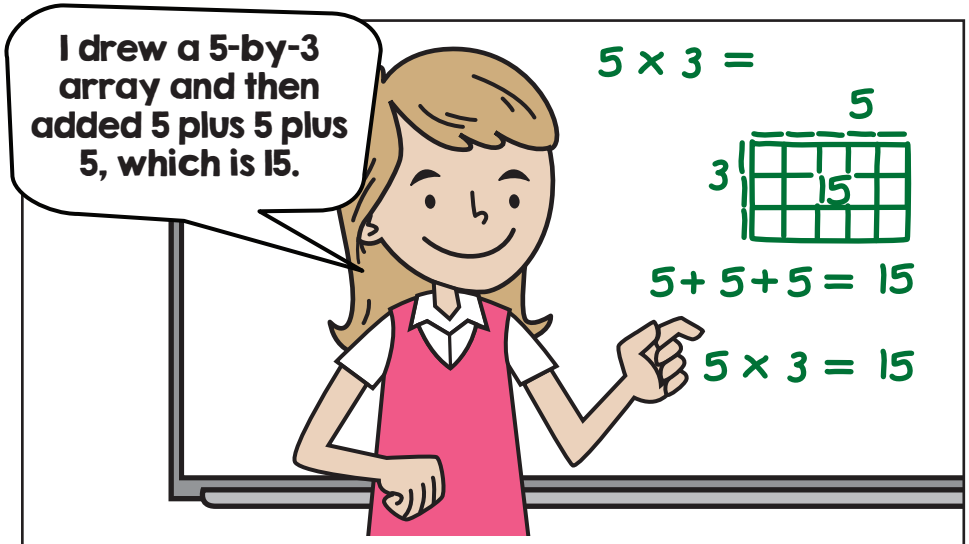
I show story problems with expressions and equations.



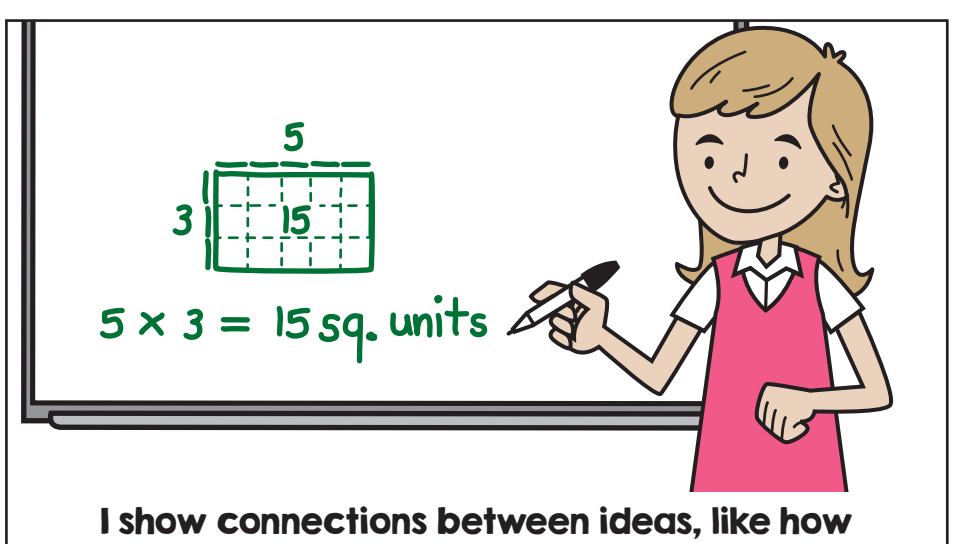
I come up with a story to describe an expression or equation.

Construct viable arguments and critique the reasoning of others. MP. 3

I share ideas, explain my thinking, and analyze others' ideas.

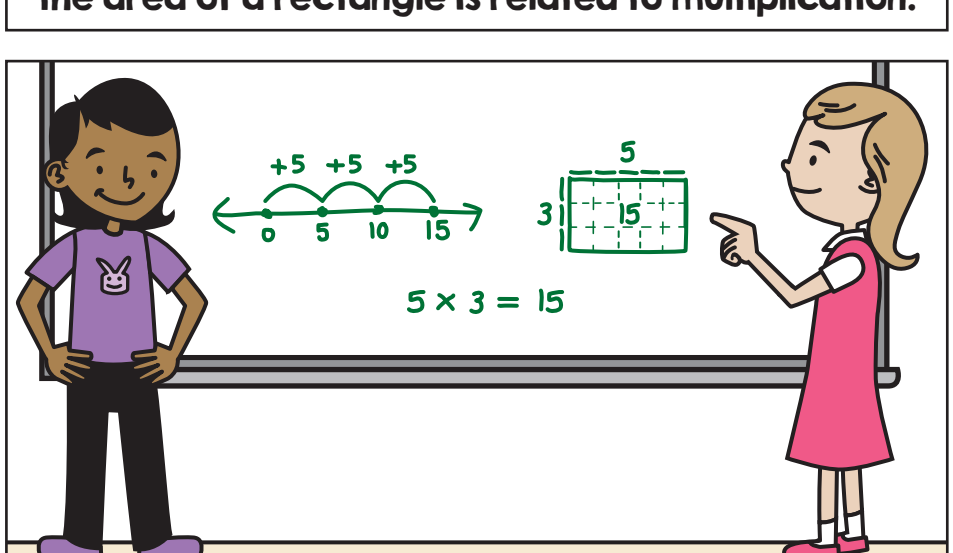


I explain how I got the answer.



I show connections between ideas, like how the area of a rectangle is related to multiplication.

I ask others to explain how they got an answer or why they chose their strategy.



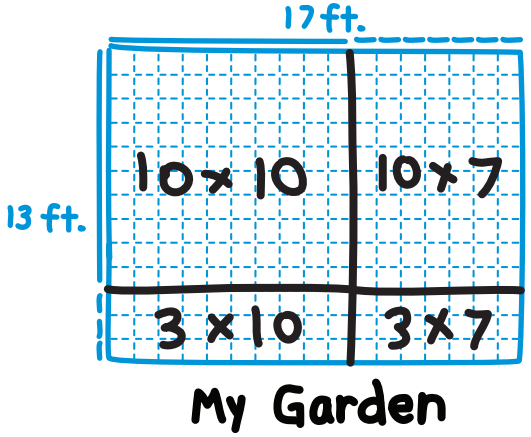
I compare my strategy to someone else's.

Model with mathematics.

MP. 4

I can see math in the world around me.
I can use math to answer questions and gain insight about situations and problems.

I can use the array I sketched to figure out the exact area. But I also can see right away that it's going to be a bit more than 200 square feet.



I use diagrams and numbers to represent situations mathematically. I think carefully about what those diagrams and numbers can tell me about the situation.

1	2	4	8
$\frac{3}{4}$	$1\frac{1}{2}$	3	6

8 $\frac{3}{4}$-cups will make 6 cups of water.

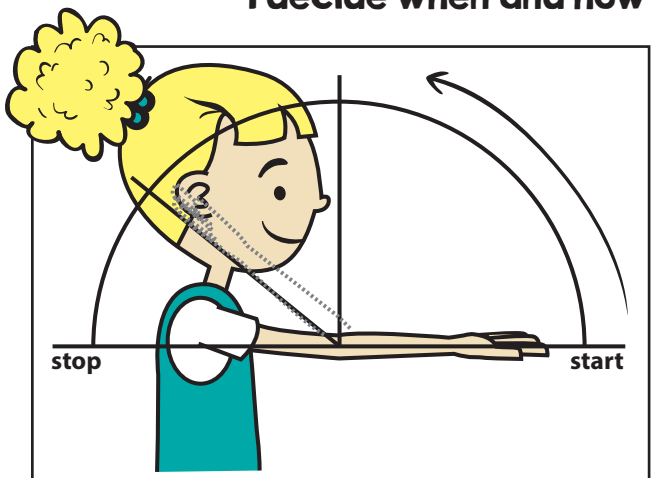
I need 6 cups to make the juice. How can I use this $\frac{3}{4}$-cup to measure out 6 cups of water?

I represent situations with mathematics and use my representations to solve problems efficiently.

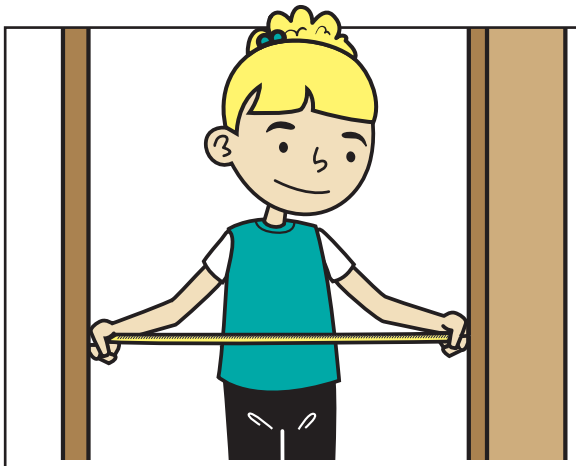
Use appropriate tools strategically.

MP. 5

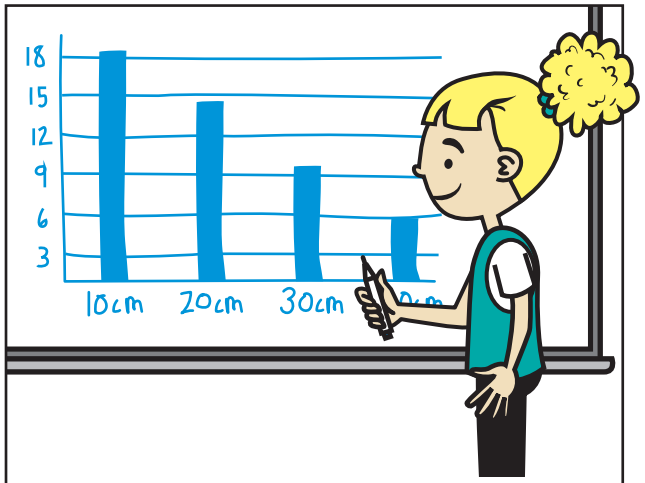
I decide when and how to use math tools, pictures, and models to help solve problems.



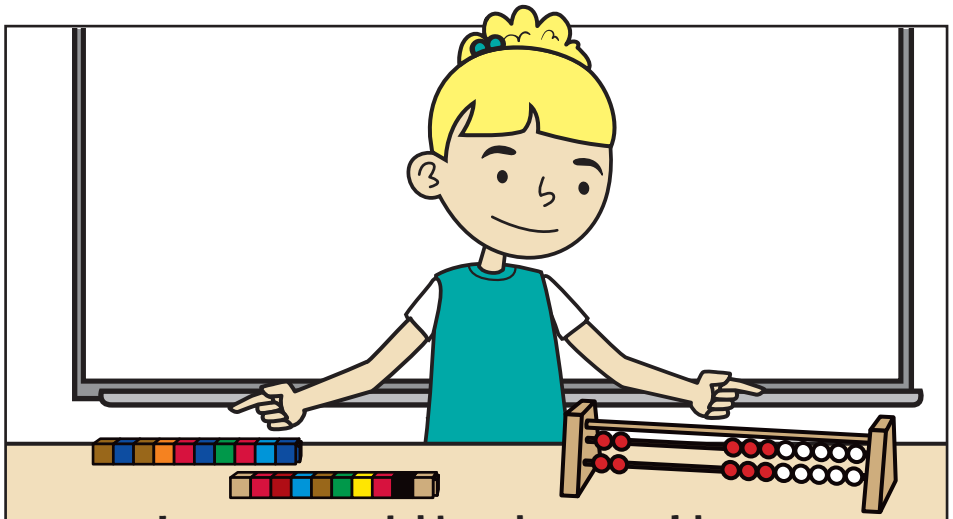
I know when I can estimate and when I need to find the exact answer.



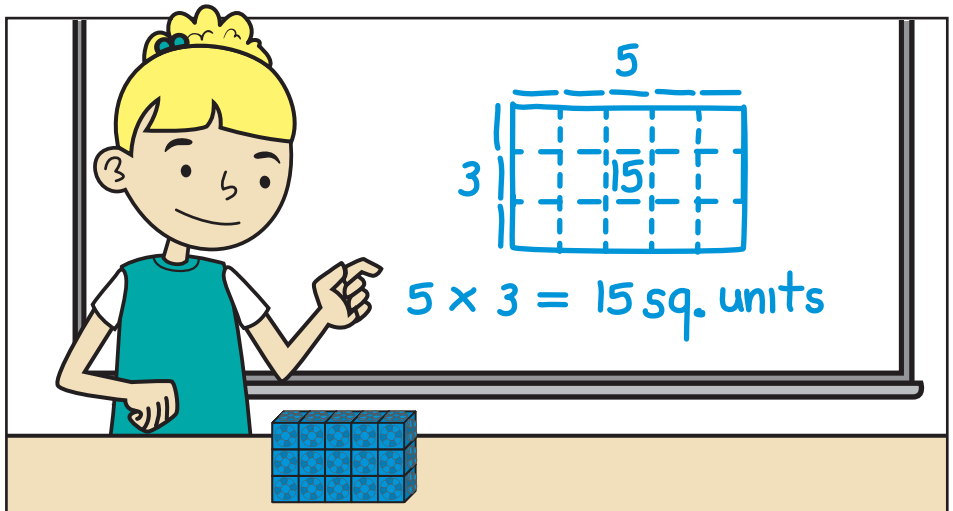
I use tools like rulers and meter sticks to compare units of measure.



I represent and explain data with graphs.



I use one model to solve a problem and a different model to check my answer.

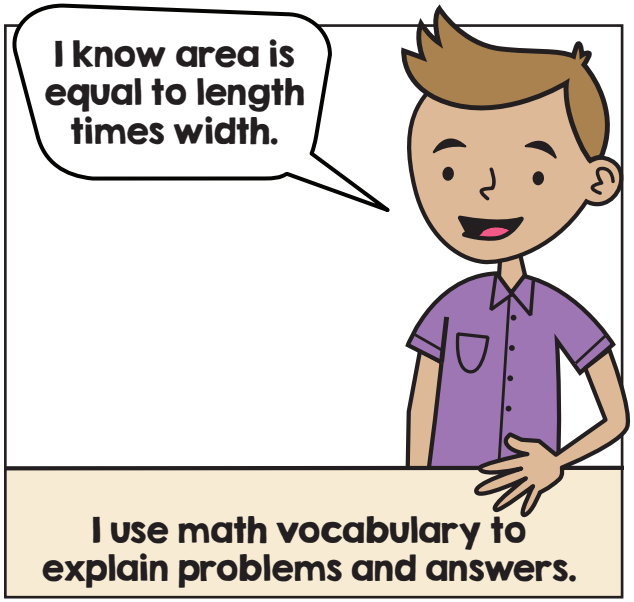


I determine whether the tool I selected makes sense.

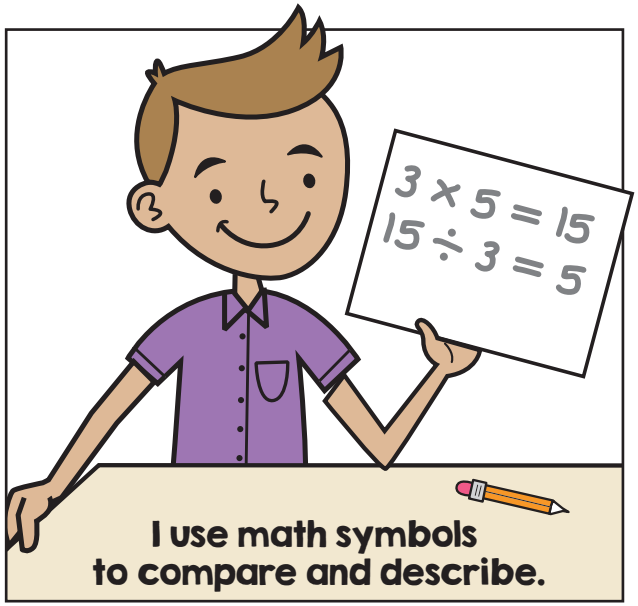
Attend to precision.

MP. 6

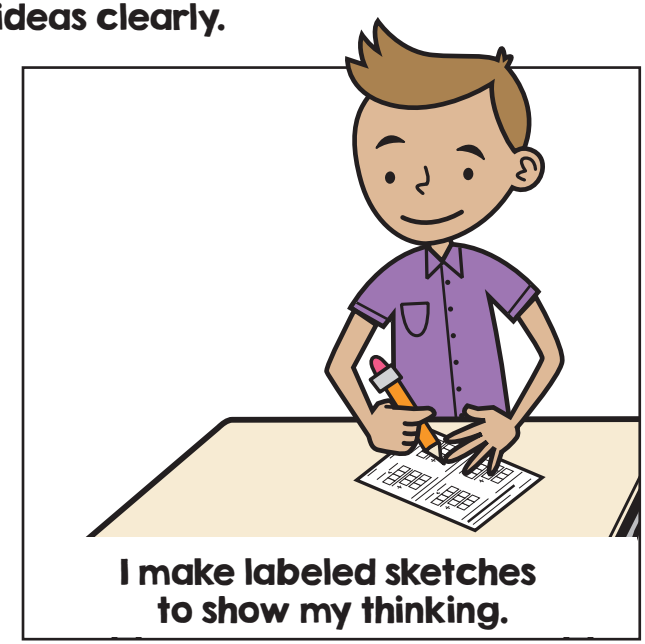
I can be mathematically precise and describe my ideas clearly.



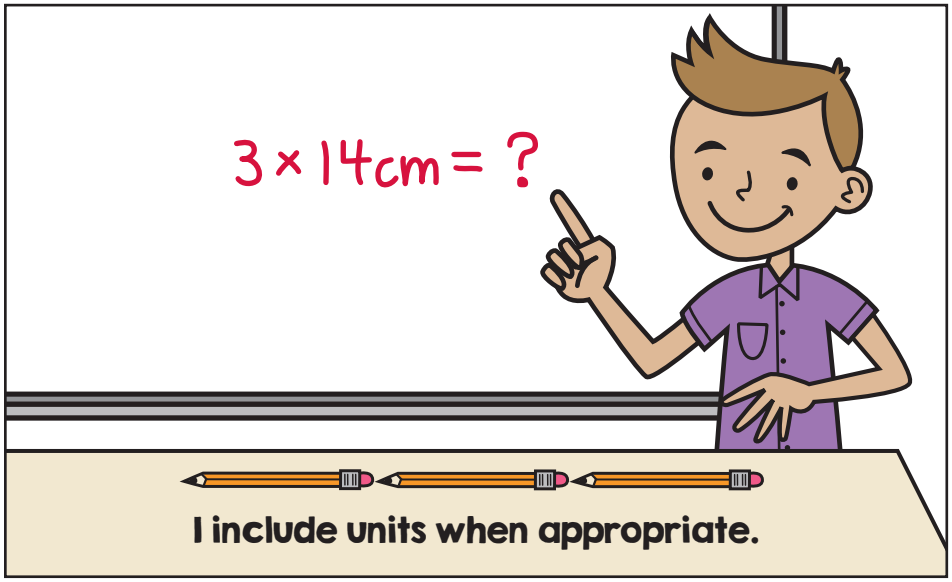
I use math vocabulary to explain problems and answers.



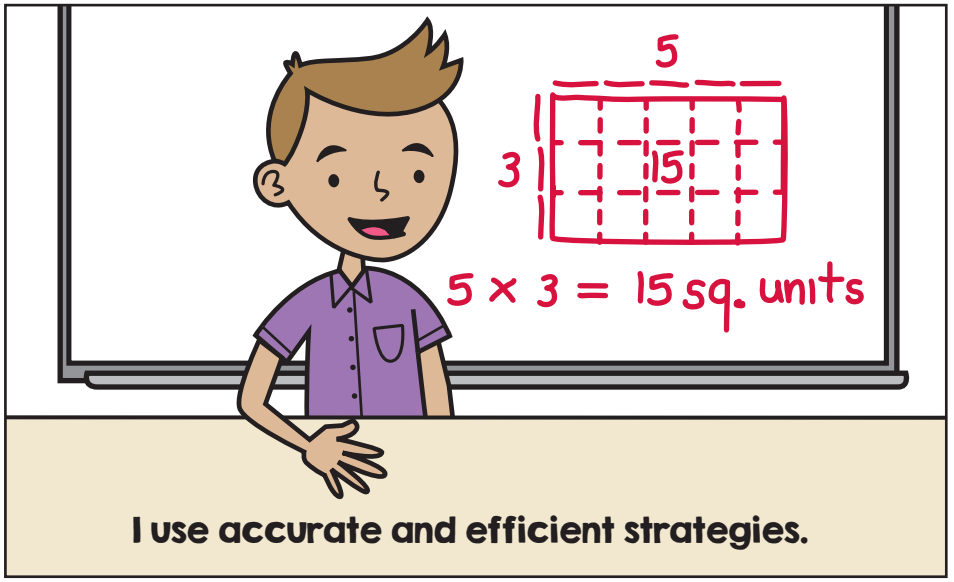
I use math symbols to compare and describe.



I make labeled sketches to show my thinking.



I include units when appropriate.

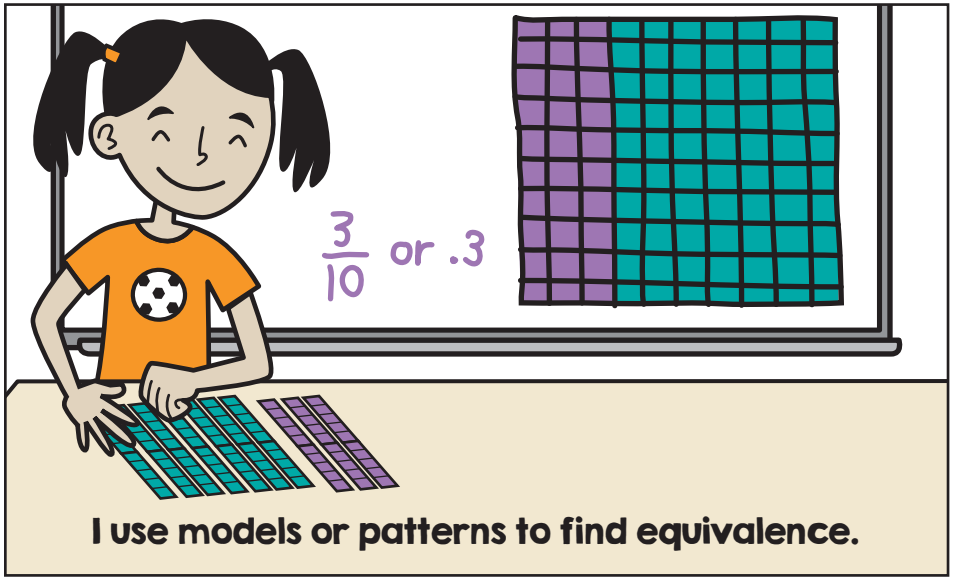


I use accurate and efficient strategies.

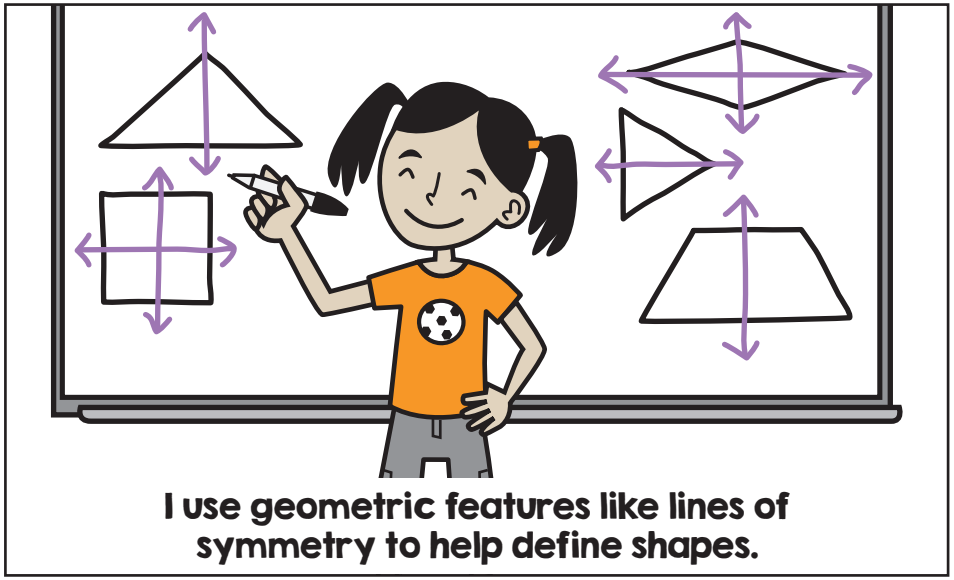
Look for and make use of structure.

MP. 7

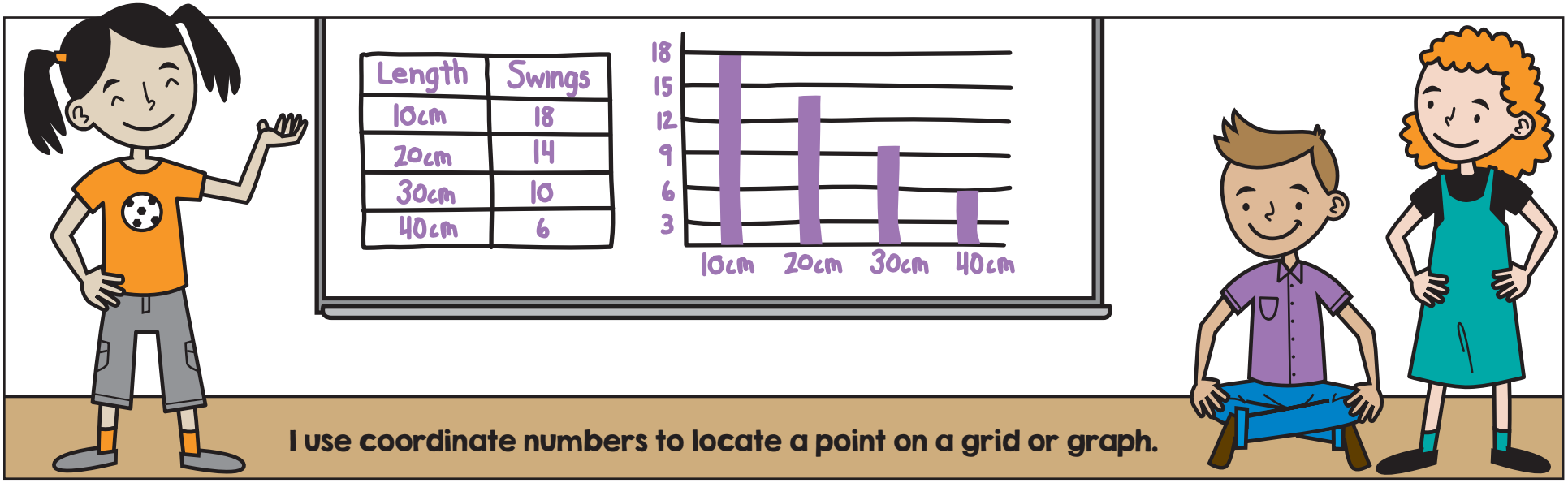
I use the structure of a number, shape, or model to solve problems and show my thinking.



I use models or patterns to find equivalence.



I use geometric features like lines of symmetry to help define shapes.

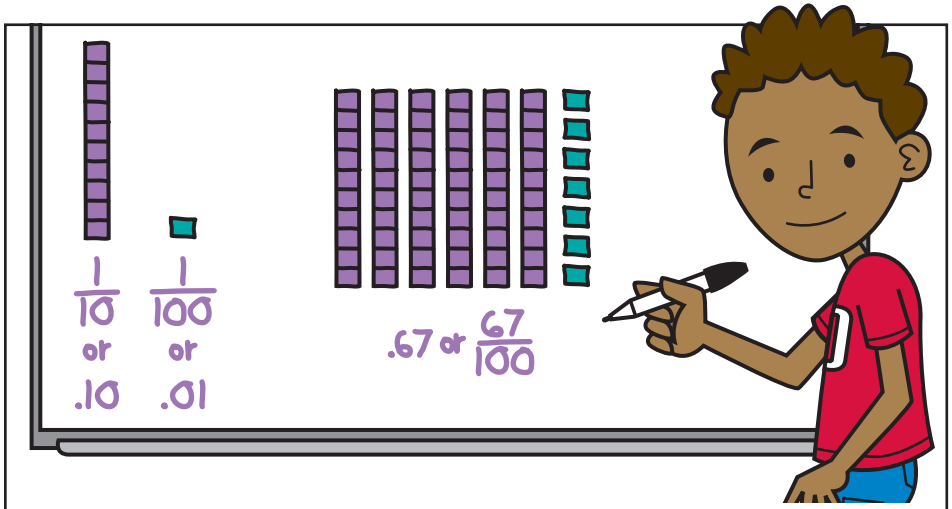


I use coordinate numbers to locate a point on a grid or graph.

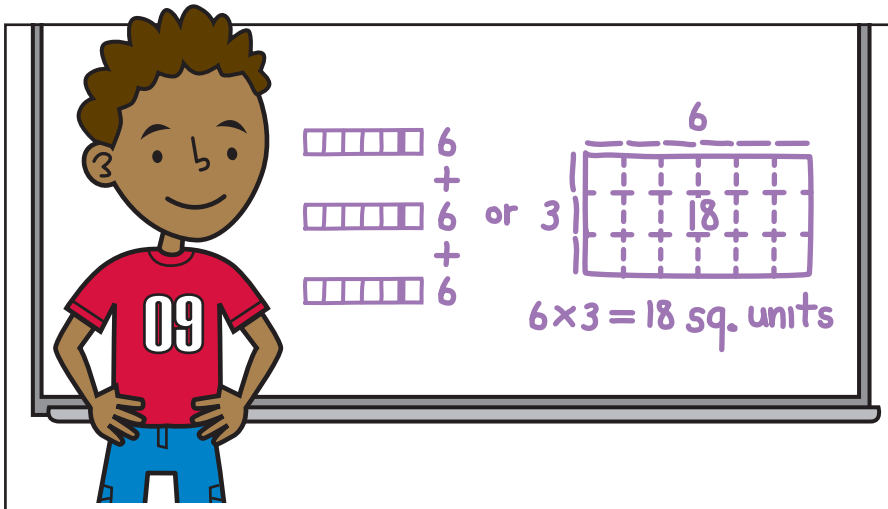
Look for and express regularity in repeated reasoning.

MP. 8

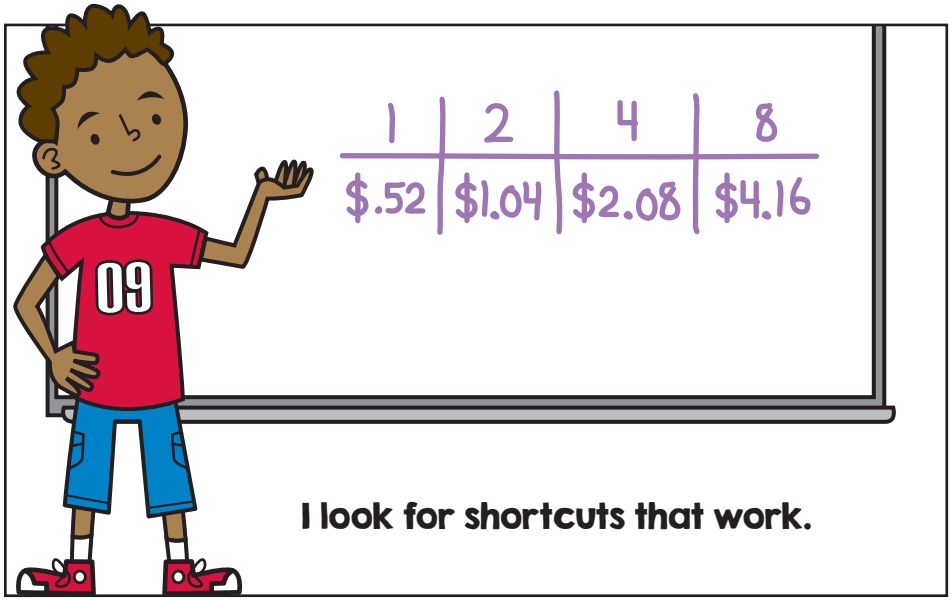
I can make generalizations about numbers and facts, and come up with strategies to solve similar problems.



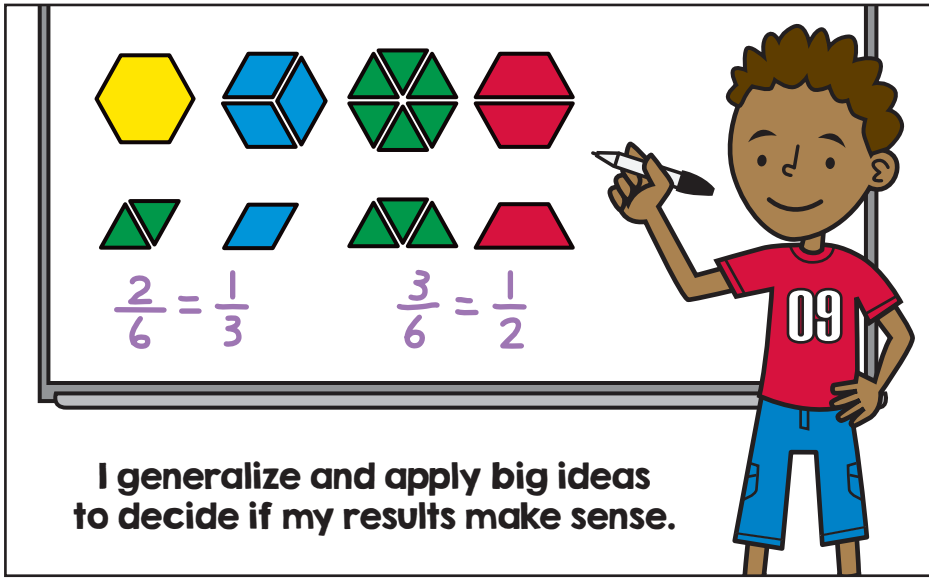
I break large numbers, fractions, and decimals into parts to make calculations easier.



I use strategies to make problems simpler instead of doing the same work over and over.



I look for shortcuts that work.



I generalize and apply big ideas to decide if my results make sense.